

POLICY OPTIONS AND PERFORMANCE DIFFERENTIALS OF RURAL FINANCE SOURCES IN SHEEMA DISTRICT, UGANDA

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ABSTRACT

Uganda's financial sector has experienced rapid growth, with considerable rise in number of banks and branch outlets, and upgrading of micro-finance institutions. However, the growth has not translated into the desired financial service provision in rural areas. There is limited research examining the relative efficiency outcomes of rural finance sources, which necessitated empirical testing to generate a comparative analysis. Ordered Probit analysis on a sample of 90 respondents in Sheema District, yielded results indicating that households that depended on banks for credit had a probability of 9.4% more likely to acquire adequate credit for production than their counterparts, and banks were significantly a superior credit source. It was concluded that if government exclusively promoted Village Loans and Savings Associations (VLSAs), it would incur an opportunity cost of 20.4% in form of trade off for efficiency foregone, the value suggesting additional resources that would be required to invest in VLSAs to only match the current average efficiency outcome. The study recommended reinstatement of preferential incentives for commercial banks opening up outlets in rural areas, stepping up efforts for capacity building to micro-finance institutions as well as micro-finance institutions themselves broadening the capital-base through purchase of securities.

KEYWORDS: Rural Credit Sources, Policy Decisions, Efficiency Outcomes, Uganda

INTRODUCTION

Background

Uganda's financial sector has of late been experiencing rapid growth. Ministry of Finance Planning Economic Development, MFPED (2013) reported that the number of commercial Banks had risen to 22 with combined outlets of 360 branches across the country. A similar growth trend has also been happening among micro-finance institutions. Specifically, four Microfinance Deposit-taking Institutions (MDIs) reportedly registered with Bank of Uganda and two (2) MDIs upgraded to commercial banks status. However, the growth trend has hardly resulted into the desired financial services provision in rural areas. MFPED (2013) notes that in response, government has since 2008 been implementing the Rural Financial Services Programme. A key outcome of the intervention, is the growth in membership to financial cooperatives from 650,000 in 2008 to about 1,150,000 as at the end of December 2012. This financial cooperative memberships is attributed to the work of both Non-Governmental Organizations (NGOs) and Government. There has been increased formation of Village Loan and Savings Associations (VSLAs) and Savings and Credit Cooperatives Organizations (SACCOs) as well as the use of mobile money services. Even with these developments and reported outcomes, the rural sector remain grossly underserved with financial services.

Kasirye (2007) observed that only 6% of the rural communities had a bank branch located within the community while only 21% had a MFI located in the locality. On the other hand, 80% of the urban communities had access to at least a

bank branch while 89% had access to a MFI with in the community. Worse still, the SACCOs and VLSAs that are more present in rural areas, are unreliable for adequate credit services. Several reasons have been advanced to explain the under-performance of these financial cooperatives. Lukwago (2010) reported that SACCOs still experience management deficiency, lacking staff with competences in micro-finance and basic accounting. They are also prone to fraud, high default rates and political interference. As such, most rural households obtain credit predominantly from informal sources - mainly friends or relatives (Kasirye, 2007). The VLSAs are even worse, because a good number neither open bank accounts nor maintain books of accounts for self-examination. Unfortunately, the empirical research responding to all these challenges is very limited.

Although, there is a host of research work on rural finance elsewhere in the world, some of the most recent ones include Nwankwo (2013), Moti *et al.* (2012), Akpan *et al.*, (2012), Rahman *et al.* (2011); there are only a few in Uganda. Among studies in Uganda examining micro-level credit services, Mpuga (2004) analyzed determinants of demand for credit in the rural areas of Uganda and how this credit is important for agricultural development using tobit, probit and OLS models. The study led to conclusions that the credit market is segmented with the rural peasant producers being served by relatives/friends and self-help credit associations. Secondly, the loan applications of rural producers were less likely to succeed, and of those that do, only small size loans were granted. Kasirye (2008) estimated a probit model to determine the probability of a household applying for credit, and reported that, at the mean, a household having at least one savings account increases the probability of having applied for credit by 39% among rural households. Other important determinants for credit demands included household income and specifically, increasing household income by 10% increased the probability of rural households applying for credit by 17%. However, the two never provided inferential comparisons on performance of the available credit sources in rural areas. With a number of policy decisions taking place at macro-level, it is time to assess their outcomes at micro-level and provide feedbacks to top-level policy-makers and economic planners.

Rural finance and credit viewed from the policy analysis perspective has various implications to different interest groups. It can be used by government to promote policies with equity and efficiency objectives when incentives are provided that enhance capital acquisition by marginalized groups and increase overall production. To the farmer, it is a source of capital for production while to the consumer it enhances consumptions. In policy analysis framework, efficiency is achieved when the allocation of scarce resources in an economy produces the maximum amount of income and the allocation of goods and services brings highest consumer satisfaction (Pearson *et al.*, 2003). Equity refers to the distribution of income among groups or regions that are targeted by policy makers. Trade-offs arise when one objective can be furthered only if another is impeded – that is, when gains for one goal result in losses for another. When trade-offs exist, policymakers have to place weights on the conflicted objectives – by determining how much they value gains from one objective versus losses associated with a second objective (Pearson *et al.*, 2003). Previous studies have not examined rural financial market in the context of weighing alternative choices of rural credit provision approaches, hence depriving the policy formulation process of opportunity of empirical basis for decision-making.

Previous studies have shown that credit plays an important role in increasing agricultural productivity. Timely and easy access to credit enables farmers (including marginal farmers) to purchase the required inputs and machinery for carrying out farm operations and increase production (Abedullah, 2009; Saboor *et al.*, 2009). Nwankwo (2013) points out that the cost implication of processing agricultural loans in the rural economy makes it unattractive for conventional banks

to channel their resources to farming. Although, the commercial banks finance agricultural activities, their credits are urban based and so small that their impact cannot be felt in the rural areas where farming actually takes place. In Uganda, credit provision to private agricultural investment constitutes just 10% of the total loan portfolios of commercial banks (FAO, 2010).

However, government is more inclined to promoting SACCOs and VLSAs, offering limited incentives to commercial banks to support the rural sector, yet the efficiency of these financial cooperatives raises more questions than answers. Whether the appropriate approach should be commercial banks or micro-finance institutions, rural finance is a necessity for all-inclusive economic development. This is because benefits of rural finance are as good as those of agricultural finance since more than 80% of the population dwell and derive livelihoods from rural areas where the main economic activity is agriculture. Empirically, a knowledge void exists on quantified efficiency outcomes of the main sources of rural finance. It was hypothesized that commercial banks were significantly a superior source of rural finance while a policy decision to exclusively promote VLSAs would represent a significant opportunity cost to government in form of additional resources required to invest in VLSAs in order to achieve the desired efficiency outcome. Findings on relative performances of rural finance sources provide clues to government on how much it would cost or save in making alternative choices for intervening in rural financial markets.

Conceptual Framework

This study adopts the conceptual framework by Olatomide and Omowumi (2011), which provides that there are three major nodes in the financial intermediation system namely: saving, intermediation and borrowing. Saving is the part of income reserved for future use, that is, future production and consumption. In the absence of saving, there cannot be a build up of capital stock to increase production of goods and services. However, savings in a society does not become an investment in capital until it is borrowed and utilized. The savers generally do not know those willing to borrow to increase production. Similarly, potential borrowers also do not know where to obtain required funds from. The passage of savings from mere idle and sterile funds into borrows and productive instrument is affected by financial intermediaries. These consist of formal and informal institutions.

Furthermore, Olatomide and Omowumi (2011) explain that financial intermediaries are an integral part of the broader concept of rural financial markets which embrace all rural institutions (the rules and regulations of the society) which affect accumulation and use of savings, the allocation of investment capital, the flow and holding of funds and indeed, the integration of rural financial markets with national and international capital markets. The intermediation process is a reversible flow of funds from savers to users through intermediaries. The borrower must of necessity provide evidence of a debt obligation to the intermediary for the loan. In the same process, the intermediary provides savers a range of products and opportunities for further investments.

It is obvious, therefore, that financial intermediation has a key role in channeling funds to rural development and agriculture. The success of this role is dependent on both the efficiency of the financial intermediation and government policy. For the efficiency to be realized, credit decision should be based on a thorough evaluation of the risk conditions of the lending and the characteristics of the borrower (Akpan *et al.*, 2012). However, when government intervenes, it influences the economic outcomes of the financial intermediation. For instance, it can selectively offer attractive bank rates to financial institutions lending to agriculture to enhance provision agricultural credit for production or invest resources in small-scale financial service provider so as to encourage competition that yields more efficient services for the rural sector.

METHODOLOGY

Study Area

The study was carried out in August 2012 in two sub counties of Sheema District, Uganda, namely: Kyagyenyi and Kagango. In this study area, majority of the population derive their livelihood from cattle keeping as their traditional economic activity. Recently, there has been an increased shift to cooking banana production and a significant number of residents tending to smallholder commercialization. This kind of production can be attributed to high amount of annual rainfall (of bimodal pattern) received in area. In addition, a considerable number of these banana producers have of late increasingly demanded credit for production though with a high rate of default. Therefore, data on credit use was collected from banana producers in the area.

Data Sources

Primary data was obtained using a purposive and systematic sampling procedure. For purposes of sampling, three strata were created to serve as a sampling frames from which a representative sample of 92 respondents was drawn. The first stratum consisted of households using micro-finance credit popularly known as Savings and Credit Cooperative Organization (SACCOs) whose registration is undertaken by the District Commercial Office (DCO). Lists of borrowers of varying lengths ranging from 6 – 9 for the cropping season of August 2011 to July 2012 were collected from nine SACCOs. These lists were subjected to systematic sampling of picking every even number on each list and this process yielded a sample of 68 households who were interviewed, though 1 respondent's questionnaire was dropped due to inconsistency in data.

The second stratum comprised of households relying on informal groups' savings for source of credit commonly referred to Village Loans and Savings Associations. To obtain VLSA members, two parishes were randomly selected from each of the above sub counties followed by random selection of three villages from each parish. From each village, chairpersons of LCI were asked to identify all VSLA operating in the village along with their contact persons. These contact persons were asked to provide two lists namely: a list of members known to them who had borrowed from the groups' savings and another for those members who had used bank credit in the cropping seasons stated above. The category of VLSA created a sample of 15 respondents who were all interviewed because of their small number. However, one respondent's data was inadequate and was dropped from final analysis, limiting the stratum sample to 14 respondents. The category of bank credit users formed the third stratum who were 9 in total and were all interviewed for the reason explained above. In summary, the whole process yielded a final sample for analysis of 90 respondents.

Analytical Methods

Households' Credit Capital Sources

Data analysis was done using descriptive statistics involving cross-tabulation method. The Chi-square (χ^2) test was used to establish the relationship between credit amount accessed in a cropping season and the number of houses relying on a source of credit sources (independent variables). Furthermore, the study tested for the strength of the relationships between these two variables. The dependent variable (classes of amount of credit accessed) was constructed as shown in **Table 1**:

Table 1: Description of the Dependent Variable

Variable	Ordinal Values of Respondents' Credit Class
<i>Amount credit accessed (Y)</i>	= 0 if $\leq 1,000,00$
	= 1 if $1,000,000 - 1,999,999$
	= 2 if $2,000,000 - 2,999,999$
	= 3 if $3,000,000 - 3,999,999$
	= 4 if $4,000,000 - 4,999,999$
	= 5 if $5,000,000 - 5,999,999$
	= 6 if $6,000,000 - 6,999,999$
	= 7 if $\geq 7,000,000$

Determining Performance of Credit Sources among Rural Households

The Amount of credit (Y) obtained by the banana producer in Uganda shillings was modeled as the dependent variable. This amount of credit is assumed to be highly dependent on the credit source ($Cred_Soc$). In this study, socio-economic factors that have been reported by previous studies to affect credit accessibility are introduced in the model (). Thus, the empirical model was expressed as shown in equation (1) below:

$$Y_i = \beta_0 + \beta_{1,ij} Cred_Soc_{i,j} + \beta_{2,i} PostSec_Educ_i + \beta_{3,i} \ln Qty_Sold_i + \beta_{4,i} \ln Farm_Size_i + \beta_{5,i} \ln Far_Exp_i + \beta_{6,i} \ln Hrd_Labour_i + \beta_{6,i} \ln Age_i + \varepsilon \quad (1)$$

Where j refers to the j^{th} credit source i.e. $BCrdt$ (bank credit source = 1; otherwise 0), $MCrdt$ (micro-finance credit source = 1; otherwise 0), $GCrdt$ (informal group savings source = 1; otherwise 0). $PostSec_Educ$; a dummy variable (if household head had attained post-secondary education = 1; otherwise 0). Qty_Sold ; quantity of banana bunches sold (number), $Farm_Size$; size of farmland in acres, Far_Exp ; farming experience in years, Hrd_Labour ; hired labour (number of persons), and Age ; age of household head in years. ε , the error term, i ; the i^{th} respondent in the sample; and \ln represents natural logarithm and $\beta_{0,1-6}$ are the various co-efficients to be estimated.

Y is a generated latent unobservable dependent variable underlying threshold credit levels obtained from a financial intermediary by the i^{th} banana producer in the sample. The latent variable (Y_i) exhibits itself in ordinal categories, rendering the Ordered Probit Model (OPM) preferable to the Ordinary Least Squares (OLS) as most suitable estimator for the empirical framework in equation (1). In the OPM, the dependent variable can be coded values as 0, 1, 2...k. The response of category k is thus observed when the underlying continuous response falls in the k^{th} interval as follows;

$$Y = \begin{cases} Y^* = 0 & \text{if } Y^* \leq 0 \\ Y^* = 1 & \text{if } \alpha_0 < Y^* \leq \alpha_1 \\ Y^* = 2 & \text{if } \alpha_1 < Y^* \leq \alpha_2 \\ \dots & \\ \dots & \\ Y^* = 7 & \text{if } \alpha_6 < Y^* \leq \alpha_7 \end{cases} \quad (2)$$

Where Y_i^* ($i = 0, 1, 2, \dots, 7$) are the unobservable threshold parameters that will be estimated together with other parameters in the model as explained in Greene (2000). The credit category classes (for variable, Y_i) are as presented in **Table 1** explained above.

Following the regression in equation (1) above, predictions can be estimated using the Maximum Likelihood (ML) method (Mufuru *et al.*, 2007). The probabilities for each of the observed ordinal response which in this study had 7 classes (0, 1, 2, ..., 7) is as given below;

$$\begin{aligned} \text{Pr ob}(Y = 0) &= P(Y^* = 0) = P(\beta_i X_i + e_i = 0) = \phi(\beta_i X_i) \\ \text{Pr ob}(y = 1) &= \phi(\alpha_1 - \beta_i X_i) - \phi(\beta_i X_i) \\ \text{Pr ob}(Y = 2) &= \phi(\alpha_2 - \beta_i X_i) - \phi(\beta_i X_i) \\ \text{Pr ob}(Y = 7) &= 1 - \phi(\alpha_6 - \beta_i X_i) \end{aligned} \quad (3)$$

Where, $0 < Y_1^* < Y_2^* < Y_k^*, i = 1, 2, 3, \dots, k$, the cumulative normal distribution function such that the sum total of the above probabilities is equal to one. The marginal effects of the explanatory variables X on the probabilities are not equal to the coefficients. Following the approach of Damisa and Yohanna (2007), the marginal probabilities can then calculated from the Ordered Probit Model as:

$$\frac{d \text{Pr ob}(Y_k)}{dX_k} = [\phi(\alpha_{k-1} - \beta' X_k) - \phi(\alpha_k - \beta' X_k)] \beta \quad (4)$$

where $\phi(\cdot)$ is the normal density function, α_k the threshold parameter and X_k , the k^{th} is the explanatory variable. In equation (1), apriori sign expectations are $\beta_j > 0$ if the j^{th} credit source has a probability distribution more superior than alternative credit source and $\beta_j < 0$ if otherwise, and $\beta_{2-7} > 0$.

RESULTS AND DISCUSSIONS

Distribution of Households by Credit Amount and Source

Cross-tabulation results presented in **Table 2** revealed indicated the existence of a relationship between the VLSA credit and the amount of credit accessed. χ^2 was 21.7 and with $p = 0.001$ suggesting a positive and significant relationship. The linear association between the two variable of 14.5 was also significant ($p = 0.000$).

Table 2: Cross-Tabulation of Credit Amount and Sources

N= 90	Credit Sources			
Amount Credit Class (UGX)	VLSA	Micro-Finance	Banks	Total
<1,000,000	3	1	0	4
1,000,000 – 1,999,999	6	10	0	16
2,000,000 – 2,999,999	4	27	2	33
3,000,000 – 3,999,999	1	18	3	22
4,000,000 – 4,999,999	0	6	1	7
5,000,000 – 5,999,999	0	4	3	7
≥ 6,000,000	0	1	0	1
Total	14	67	9	90
Other Statistics				
Chi-Square	21.7 (0.001)	9.8 (0.132)	11.8 (0.067)	
Likelihood Ratio	19.6 (0.003)	9.2 (0.164)	10.6 (0.102)	
Linear Association	14.5 (0.000)	1.5 (0.223)	8.0 (0.005)	

All figures in parentheses are the p-values indicating levels of significance, UGX = Uganda Shillings

Similarly, a positive and strong relationship existed between the bank credit and the amount of credit accessed ($\chi^2 = 11.8$; $p = 0.067$) and had a linear association of 8.0 ($p = 0.005$). However, results for micro-finance credit did not seem to suggest any relationship between the two variables. One striking observation however, was that credit amount accessed by rural households from VLSAs fell in lower classes of credit amount, not exceeding UGX 4,000,000. On the other hand, in the bank credit category, no household reported to have acquired a credit amount less than UGX 2,000,000. This could be due to the fact that VLSAs normally have very limited capital and in most cases are unable to provide high amounts of credit. On the contrary, banks though have more stringent standards for credit services, their capital allows them more freedom of supplying higher credit amounts to their clients.

Comparative Analysis of Performance of Rural Credit Sources

Results of Ordered Probit model are presented in table **Table 3**. The coefficient for bank credit was positive and significant while that of informal groups' savings was negative and significant. Although the coefficient for micro-finance was positive, it was not only insignificant statistically but also its magnitude value much smaller when compared to that of bank credit.

The co-efficient for VLSAs was negative and statistically significant. Among the socio-economic variables, post-secondary education, quantity of banana bunches sold during the cropping season, hired labour and age of household head were all bearing positive signs conforming to theoretical expectation and statistically significant, in the three model specifications for all credit sources. Islam *et al.* (2013) report closely related results on socio-economic effects on credit access in Bangladesh. The implication of such statistical significance is that such variables can be used to influence credit sources performance by means of policy intervention. It was only farming experience and the size of farmland that were not significant in all the empirical models.

Table 3: Ordered Probit Analysis of Credit Sources and Household Credit Use Determinants

Explanatory Variables	Bank Credit		Micro-Finance Credit		VLSA Credit	
	Co-eff.	Z-Value	Co-eff.	Z-Value	Co-eff.	Z-Value
BCrdt	0.75 (0.40)*	1.85				
MCrdt			0.09(0.31)	0.28		
GCrdt					-0.96 (0.43)**	-2.24
PostSec_Educ	1.65 (0.34)***	4.93	1.75 (0.33)***	5.29	1.71 (0.33)***	5.14
lnQty_Sold	0.78 (0.34)**	2.31	0.83 (0.34)**	2.45	0.85 (0.34)**	2.51

Table 3 – Cond.,						
lnFarm_Size	0.60 (0.44)	1.35	0.51 (0.44)	1.17	0.56 (0.44)	1.26
lnFar_Exp	-0.21 (0.38)	-0.56	-0.19 (0.38)	-0.51	-0.35 (0.39)	-0.91
lnHrd_Labour	0.69 (0.29)**	2.38	0.67 (0.29)**	2.32	0.62 (0.29)**	2.12
lnHH_Age	4.74 (1.51)***	3.15	4.55 (1.50)***	3.04	4.59 (1.53)***	3.01
LR χ^2 (7)	54.88		51.52		56.61	
Prob > χ^2	0.0000		0.0000		0.0000	
Pseudo R ²	0.23		0.22		0.24	
Observations	78		78		78	

All figures in parentheses are values of standard error, *, **, *** significance levels at 10%, 5% and 1%

The Chi-square of Log likelihood ratios (LR) of Bank credit (54.88), micro-finance credit (51.52) and informal groups' credit (56.61) model were highly significant ($P > \chi^2 = 0.000$; in all cases), meaning that in the specified models, explanatory variables strongly predicted outcomes in the dependent variable. Based on the high significance of the empirical models, the null hypothesis that banks were a significantly superior credit sources for efficiency outcome when compared with micro-finance and Village Loans and Savings Associations could not be rejected. Also the null hypothesis that any policy decision to exclusively promote VLSAs as a credit source would be associated with an opportunity cost in form of efficiency foregone could not be rejected. However, as Devaraja (2011) suggests, banks must be vertically integrate their services with farmers for credit flow to smallholder farmers to increase.

Derived marginal effects of the OPM are presented in **Table 4** below. Accordingly, households relying on banks for source of credit had a probability of 9.4% better chances of acquiring adequate credit for production when compared to counterpart households that depended on other credit sources *ceteris paribus*. On the other hand, households that were exclusively dependent on VLSAs for credit were associated with a probability of 20.4% worse off in credit acquisition adequacy as compared to counterpart households in the sample. Therefore, any policy decision to exclusively promoted Village Loans and Savings Associations, would involve incurring an opportunity cost of 20.4%, as trade off in efficiency outcome foregone. In other words, in the representative sample used in this study, it would take government to invest 20.4% more resources in the VLSA in order to match the average efficiency outcome.

Households whose heads had attained post-secondary education stood better chances of acquiring credit from all the credit sources studied in the sample, however with a probable percentage being slightly highest in the informal group savings. These households were associated with a probability of 25.5%, 24%, and 23.9% more likely to acquire higher amounts of credits in the informal groups savings, bank and micro-finance credit sources respectively.

Table 4: Marginal Effects

Explanatory Variable	Bank Credit		Micro-Finance Credit		Informal Groups Credit	
	Co-eff	Z-Value	Co-eff	Z-Value	Co-eff	Z-Value
BCrdt	0.094**	2.33				
MCrdt			0.016	0.27		
GCrdt					-0.204**	-2.31
PSec_Educ	0.240***	3.45	0.239***	3.46	0.255***	3.58
lnQty_Sold	0.155*	1.95	0.160**	2.01	0.175**	2.08
lnFarm_Size	0.118	1.28	0.099	1.12	0.114	1.21
lnFar_Exp	-0.041	-0.55	-0.037	-0.51	-0.072	-0.88
lnHrd_Labour	0.137**	2.06	0.130**	2.02	0.127*	1.91
lnHH_Age	0.941**	2.42	0.880**	2.37	0.942**	2.39

*, **, *** significant levels at 10%, 5% and 1%

Generated elasticities from quantity of banana bunches, indicated that a 1% increase in bunches sold annually would increase demand for more credit by 0.175%, 1.60% and 1.55% in the VLSA, micro-finance institutions and banks respectively. This could be because selling more bunches yields more household incomes for the producers and consequently reducing the risk-averse behavior associated with credit acquisition, these farmers would that they can meet loan repayment obligations from the produce revenue. This finding also sends a message to credit suppliers that their performance with loan portfolios could be improved if they tied loan commercial activities with extension services that enhance more farm-level productivity and overall production. Otieno *et al* (2009) also reached a similar conclusion among honey producers in Kenya. For hired labour, 1% increase in the number of labourers employed on the farm caused 0.137%, 0.130% and 0.127% more demand for bank, micro-finance and VLSA credit respectively. Likewise, 1% increase in the age of household head increased the amount of credit accessed by 0.942%, 0.941% and 0.880% from VLSA, micro-finance and banks respectively.

CONCLUSIONS AND POLICY RECOMMENDATIONS

The study used a representative sample of 90 respondents who are credit using banana producers from Sheema District to examine the leading sources initial capital for investment in agriculture and current sources credit for production. It also undertook a comparative analysis of the performance of three main sources of rural finance. Results of cross-tabulation revealed a positive and strong relations between the amount of credit accessed and either of bank and VLSA credit sources, implying dependent and independent variables were significantly moving in the same direction. Results from the Ordered Probit Model have led to the conclusion that banks were significantly a superior source of credit while a policy decision to exclusively promote VLSA would be associated with opportunity cost for efficiency outcome foregone. Ultimately, a policy decision to exclusively promote VLSAs at the expense of all other credit sources would be associated with additional resource cost of 20.4% required to invest in VLSAs in order to match the current average efficiency outcome.

This study recommends promoting an integrated approach to reaching out to the rural sector with credit for production. Since, banks are currently shunning opening up branch outlets in rural areas and avoiding providing credit to agriculture, government should consider preferential treatment incentives to banks operating in rural areas with innovative financial instruments so as to encourage them invest in those areas. One way of achieving this, is offering lower bank rates to all commercial banks providing credit to smallholder farmers. Government also needs to step up efforts for capacity building to VLSA and SACCOS focusing largely on management capacity and resource mobilization. For credit suppliers, they should strengthen educational programmes on financial services, undertake training of rural small-scale producers on credit management and diversify their outreach activities to include promoting productivity-enhancing technologies to guarantee more incomes and increase demand for production credit. Specifically for VSLA and SACCO, should widen their capital base through diversifying sources of incomes such as purchase of treasury bills from the central bank and other securities from private firms.

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